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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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In the Matter of )  
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Amendment of Parts 2, 21, and 94 )  
of the Commission's Rules To )  
Accommodate Private Microwave )  
Systems in the 1.71-1.85 GHz Band )  
and in Bands Above 3 GHz )

RM-7981

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

To: The Commission

COMMENTS OF CENTEL CORPORATION

Centel Corporation ("Centel") hereby submits its comments on the above-captioned petition for rulemaking filed by the Utilities Telecommunications Council ("UTC").<sup>1</sup> In its petition, UTC urges the Commission to initiate a rulemaking to permit use of the 1.71-1.85, 3.7-4.2, 5.925-6.425, and 10.7-11.7 GHz bands by private microwave systems licensed under Part 94. The proposed rule changes are intended to insure alternative microwave spectrum if the Commission reallocates the 1.85 to 2.20 GHz band for emerging technologies.<sup>2</sup>

Centel supports UTC's request for appropriate rule modifications to allow any displaced 2 GHz users to relocate to the higher microwave bands. However, the requested rule

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<sup>1</sup> See FCC Public Notice, Petition for Rule Making Filed, Mimeo No. 22934 (May 1, 1992), which set comment dates of June 1, 1992 and June 16, 1992.

<sup>2</sup> See Redevelopment of Spectrum To Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, 7 FCC Rcd 1542 (1992) (Notice of Proposed Rulemaking).

Noted  
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changes should also take into account the needs of common carrier microwave licensees in the heavily used 2.11-2.13 GHz and 2.16-2.18 GHz bands. These rule changes should precede rather than follow any involuntary relocation of 2 GHz microwave licensees to accommodate new emerging technologies.

I. THE COMMISSION SHOULD PROMPTLY ACT IN RESPONSE TO THE UTC PETITION FOR RULEMAKING

On February 7, 1992, the Commission released a Notice of Proposed Rulemaking proposing to reallocate 220 MHz of the 1.85 to 2.20 GHz band ("2 GHz band") for emerging telecommunications technologies. The affected spectrum currently is used for private and common carrier fixed microwave services. The Commission proposed to make available all fixed microwave bands above 3 GHz to accommodate existing users of the 2 GHz band.

The Notice of Proposed Rulemaking noted in passing that waivers of eligibility requirements for spectrum above 3 GHz would be granted for relocated entities. The relocated 2 GHz microwave users, however, would still be required to comply with the technical rules and coordination procedures applicable to the higher frequency bands. The Notice did not explain how or when such enabling rule changes would be implemented.

On March 31, 1992, UTC filed its petition for rulemaking. UTC argues that "[i]n order to minimize the

impact of displacement from the 2 GHz microwave band, a necessary condition precedent is that the Commission have adequate replacement spectrum with appropriate technical characteristics."<sup>3</sup> UTC underscores the fact that the Commission has not yet proposed specific modifications to the technical, coordination, and eligibility rules to accommodate relocated 2 GHz users within the higher frequency microwave bands. Consequently, the Commission is urged to defer further action on the ET Docket No. 92-9 Notice until such rule amendments are considered and adopted.

UTC sets forth some specific suggestions for necessary rule modifications and frequency allocations to accommodate private microwave use in alternative bands. These include:

- Obtaining shared access for non-government users to the 1710-1850 MHz band now allocated exclusively to Government operators.
- Reallocating a portion of the 4 GHz band to the Fixed-Satellite Service on a secondary basis.
- Rechanneling the 4 and 6 GHz bands and eliminating loading requirements for private microwave systems in these frequencies.
- Eliminating loading requirements for private microwave systems in the 11 GHz band.

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<sup>3</sup> UTC Petition at ii.

The Commission is also encouraged to establish an industry advisory committee to develop new technical requirements and interference criteria for the replacement bands.<sup>4</sup>

II. THE REQUESTED PROCEEDING SHOULD BE EXPANDED TO ADDRESS  
RELOCATION NEEDS OF 2 GHZ COMMON CARRIER LICENSEES

UTC's petition focuses on the need to accommodate private users of the 2 GHz band. Any consideration of rule modifications to support the relocation of displaced 2 GHz licensees also must necessarily take into account the needs of common carriers. Equally important issues, as discussed below, confront relocated 2 GHz common carrier operations.

Common carriers are extensive users of the 2 GHz microwave band. As a result, Centel is deeply concerned that the relocation measures proposed in the emerging technologies docket will have a significant, deleterious impact on facilities essential to the provision of telephone and cellular services.<sup>5</sup> Part of this concern is that the current configuration of the higher frequency microwave bands will not support existing 2 GHz operations.

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<sup>4</sup> The petitioner believes that more stringent interference protection standards are necessary to achieve the degree of protection required by safety/public service systems.

<sup>5</sup> Centel will detail its concerns in comments to be filed on June 5 in ET Docket No. 92-9.

UTC has identified categories of changes necessary to permit private users to make advantageous use of 4, 6, and 11 GHz frequencies. Similar changes also will be necessary for current 2 GHz common carrier users to find a home in this band. Areas to be examined include:

- Channelization;
- Loading requirements;
- Minimum path length requirements;
- Antenna standards; and
- Modulation efficiency standards.

Channelization, in particular, presents a challenging issue. Under the Commission's Rules, the maximum permissible bandwidth for the 2110-2130 and 2160-2180 MHz common carrier frequencies is 3.5 MHz.<sup>6</sup> Centel understands that, as applied by the industry, these frequency bands currently contain 6 pairs of 3.5 MHz channels, 6 pairs of 3.2 MHz channels, and 12 pairs of 1.6 MHz channels. At present, the 4 GHz band has channels only with a 20 MHz bandwidth; those in the lower portion of the 6 GHz band have a 30 MHz bandwidth.<sup>7</sup> The upper portion of the 6 GHz band (which common carriers currently may not access) has a number of channels with 10 and 5 MHz bandwidths, and only 3 pairs of 1.6 MHz channels and 11 channels with 800 kHz bandwidth. Common carriers

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<sup>6</sup> 47 C.F.R. § 21.703(a) (1991).

<sup>7</sup> See id.

transferring 2 GHz operations either will not be able to use these bands or will use current channels in an inefficient manner.

In order to address the full range of these issues, Alcatel Network Systems, Inc. ("Alcatel"), an equipment manufacturer, has recently filed a petition for rulemaking proposing revised rules that provide "for co-primary use of all available bands by private op-fixed and common carriers, eligibility, band channelization, modulation efficiency standards and minimum channel loading requirements, minimum path length requirements, frequency coordination criteria, and antenna standards."<sup>8</sup> Centel also understands that the Telecommunications Industry Association ("TIA") will be submitting proposed technical rule revisions in the emerging technologies docket on June 5. Centel reserves the right to comment upon both sets of proposals at the appropriate time. It appears likely that the UTC, Alcatel, and TIA recommendations and the comments thereon can serve as the basis for further Commission proceedings to adopt the necessary rule amendments.<sup>9</sup>

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<sup>8</sup> Alcatel Network Systems, Inc. Petition for Rulemaking in the Matter of Amendment of Parts 2, 21, 25 and 94 of the Commission's Rules To Accommodate Common Carrier and Private Op-Fixed Microwave Systems in Bands Above 3 GHz, RM-\_\_\_\_\_, at 2 (filed May 22, 1992).

<sup>9</sup> In pursuing rule changes to accommodate 2 GHz licensees, the Commission, of course, must also ensure that  
(continued...)

III. UNDER NO CIRCUMSTANCES SHOULD THE COMMISSION  
REQUIRE THE INVOLUNTARY RELOCATION OF 2 GHZ  
COMMON CARRIER LICENSEES UNTIL THE RULES FOR  
SPECTRUM ABOVE 3 GHZ ARE REVISED

Centel employs over 430 radios operating on 2 GHz microwave frequencies in its landline telephone and cellular systems. These microwave links serve a critical role in Centel's provision of services to the public. Under the FCC's emerging technologies proposal, Centel would be required to find alternative transmission media for all of these facilities.

The Commission's ET Docket No. 92-9 Notice contemplates the movement of nearly 7,000 common carrier facilities out of the 2 GHz band into other microwave frequency bands.<sup>10</sup> As the Commission itself apparently recognizes, this is a

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<sup>9</sup>(...continued)  
existing uses of bands above 3 GHz are not disrupted. Centel employs 4, 6, and 11 GHz frequencies in its telephone and cellular operations. Adoption of rule changes as suggested above must be undertaken with care so that existing uses are not detrimentally affected. Similarly, steps must be taken to ensure that the influx of 2.1 GHz users does not adversely limit future growth or deployment of new systems in the 4, 6, and 11 GHz bands.

For example, rechannelization of the bands can be structured to permit "stacking." This would allow operators with higher capacity needs to combine channels. Likewise, as suggested by Alcatel, opening the bands to both private and common carriers would appear to increase the number of spectrum alternatives.

<sup>10</sup> See "Creating New Technology Bands for Emerging Telecommunications Technology," FCC/OET TS 92-1, at 8 (January, 1992) ("OET Report"). As UTC points out, nearly 22,000 private microwave licensees face the same prospect.

substantial number of facilities to be absorbed into the proposed new frequency homes for these operations.

To facilitate the transition, the Commission must take the steps proposed by UTC and Centel to accommodate existing 2 GHz uses. The Commission cannot force the 2 GHz licensees to employ different microwave frequencies without changing the applicable rules. Otherwise, the Commission may leave the displaced 2 GHz operators without any feasible alternative and members of the public with disrupted services.

#### IV. CONCLUSION

For the foregoing reasons, Centel urges the Commission to issue a further notice of proposed rulemaking in the emerging technologies docket or to commence a separate proceeding to consider necessary rule modifications to accommodate both common carrier and private carrier 2 GHz microwave users within the higher frequency microwave bands.



The changes must be implemented before any involuntary relocation of 2 GHz common carrier licensees occurs.

Respectfully submitted,

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June 1, 1992

CERTIFICATE OF SERVICE

I hereby certify that on this 1st day of June, 1992, I caused a copy of the foregoing "Comments of Centel Corporation" to be mailed via first-class postage prepaid mail to the following:

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